

Notice of Allowability

Application No.

10/085,919

Examiner

Cynthia Britt

Applicant(s)

MAYER ET AL.

Art Unit

2138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/5/05.
2. ☒ The allowed claim(s) is/are 1-3, 5, 6, 8 and 10-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Interview Summary (PTO-413), Paper No./Mail Date 1/4/06.
- ☒ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other _____

ALBERT D. DEARDORF
SUPERVISORY PATENT EXAMINER
ART UNIT 2138

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Werner Stermer (34,956) on January 04, 2006.

The application has been amended as follows:

Claim 8, as amended currently reads:

~~In an~~ An error determination method in a program-controlled unit using scan chains with a plurality of elements, which comprises executing the following method steps:

after a predetermined event has occurred during execution of a program by the program-controlled unit, in response to the predetermined event, placing the program-controlled unit into a state in which selected ones or all of ~~freezing~~ the elements are no longer able to change the state thereof,

using an interface to connect ~~connecting~~ the elements that are no longer able to change the state thereof to form the scan chains,

using the interface to read ~~reading~~ the scan chains, and

subsequently using the interface to identify and analyze ~~identifying and analyzing~~ an error in the program-controlled unit from a ~~result of the reading step~~ the state of the scan chains read by the interface.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

The present invention pertains to a circuit and method of recognizing errors in program-controlled units that only occur under specific conditions.

The claimed invention (claim 1 as representative) recites features such as "a plurality of elements configured to selectively change a state thereof during program execution and to be connected to form one or more scan chains; and wherein the program-controlled unit, in response to a predetermined event detected during program execution, is configured to change into a state in which selected ones or all of said plurality of elements are no longer able to change the state thereof, to subsequently connect the selected ones or all of said plurality of elements to one or more scan chains, and to read a content of the scan chains; and an interface suitable for at least one of configuring and controlling parts of the program-controlled unit provided for identifying and/or analyzing errors that have occurred in the program-controlled unit from outside the program-controlled unit, said interface being configured to effect a connection of said elements to form a scan chain, and also to read from and write to the scan chain."

The prior arts of record (Churchill et al. U.S. 6,006,347 as an example of prior arts) teach a programmable scan interface which provides a mechanism for programmably altering various signals within a SRAM to improve the observability and characterization of circuitry within a SRAM. However, the prior arts of record fail to teach "... in a program controlled unit, in response to a predetermined event detected during program execution, is configured to change into a state in which selected ones or all of said plurality of elements are no longer able to change the state thereof..." The

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prior arts also fail to teach "...an interface suitable for at least one of configuring and controlling parts of the program-controlled unit provided for identifying and/or analyzing errors that have occurred in the program-controlled unit from outside the program-controlled unit, said interface being configured to effect a connection of said elements to form a scan chain, and also to read from and write to the scan chain." As such, modification of the prior art of record can only be motivated by hindsight reasoning, or by changing the intended use and function of the prior art. Therefore, it is not clear that one of ordinary skill in the art at the time of the invention would have made the necessary modifications to the prior arts of record to encompass the limitations set forth in the present application. Moreover, none of the prior arts of record, taken either alone or in combination, anticipate nor render obvious the claimed inventions. Hence, claims 1-3, 5, 6, 8, and 10-17 are allowable over the prior arts of record.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Britt whose telephone number is 571-272-3815. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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